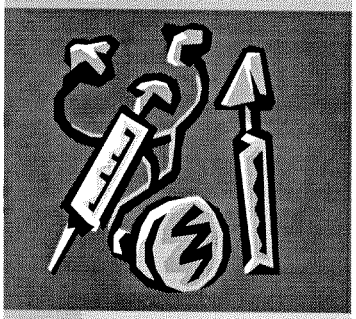
January/ February 2002

Editor:
Jean Eilertson, PharmD



The Apothecary Bulletin

PHARMACY SERVICE & THERAPEUTICS COMMITTEES
US ARMY MEDDAC, FORT CARSON, COLORADO

FORMULARY CHANGES

The Pikes Peak Region Formulary Committee met on 7 February 2002 and the Evans' P&T Committee met on 12 February 2002 with the following medications ***added*** to the Formulary:

+ bicalutamide (*Casodex*) 50mg tablets - a nonsteroidal antiandrogen indicated for use in combination therapy with a luteinizing hormone-releasing hormone (LHRH) analogue for the treatment of Stage D_2 metastatic carcinoma of the prostate
+ docusate (*Colace*) 1% solution/drops - **clinic/ward use only for ear wax removal**
+ hydroxyzine (*Vistaril*) 25mg/5ml suspension - to replace promethazine (*Phenergan Fortis*) syrup which was discontinued by the manufacturer
+ ziprasidone (*Geodon*) 20mg, 40mg, 60mg, and 80mg capsules - an antipsychotic indicated for the symptomatic treatment of patients with schizophrenia

The following was ***deleted*** from the Formulary:

- promethazine (*Phenergan Fortis*) syrup - discontinued by the manufacturer

The Pikes Peak Region Formulary Committee (with representatives from the Air Force Academy, Peterson AFB, and Evans) reviewed the CNS agents in February - no changes were made to the formulary with the exception of the addition of *Geodon*. As part of this ongoing drug class review process, the Pikes Peak Region Formulary Committee will complete its scheduled class review cycle with the dermatologic and ophthalmologic agents in March 2002.

Providers desiring to have input into the drug class reviews are encouraged to contact one of the committee members: **LTC Edward Torkilson (Pharmacy), MAJ Robert Gray (Family Practice), and Dr. Garold Paul (Internal Medicine)**. The next Formulary Committee Meetings will be held on 7 March (Pikes Peak) and 12 March (Evans' P&T). New Drug Requests must be received by the Chief, Pharmacy Service, no later than **1 March** to be considered at the March meetings.

VACCINE SHORTAGES

Presently, there is a shortage of a number of vaccines, including *Prevnar* (pneumococcal 7-valent conjugate vaccine), DTaP, MMR, and varicella.

- *Prevnar*, manufactured by Wyeth-Ayerst, is in short supply because the demand has exceeded the manufacturer's projections. The Advisory Committee on Immunization Practices (ACIP) temporarily revised recommendations for *Prevnar*, asking that it be made available first to children who are at high risk because of pre-existing medical conditions or daycare attendance. Wyeth-Ayerst expects the shortage to last through mid-2002.
- DTaP is in short supply because one manufacturer stopped producing tetanus toxoid-containing products and another manufacturer stopped producing the vaccine altogether, leaving only 2 producers. The ACIP temporarily recommends that the 5th dose of DTaP be deferred.
- Merck states that its shortages of MMR and varicella are due in part to modifications to the production line, one suggested by the FDA and another voluntary change that took longer than expected. Merck is not estimating an anticipated resolution date for the shortages. The ACIP has not made any recommendations for vaccine deferral.

If no doses of the vaccine(s) are available, health care providers are asked to track the names of patients whose vaccinations have been delayed and notify patients when the vaccine is available.

Outpatient Pharmacy provider-only telephone number:

526-7345

In this issue....

CELEBREX/ VIOXX REMINDER

Celebrex (celecoxib) recently received FDA approval for the management of acute pain and primary dysmenorrhea in adults. As a reminder, the Pikes Peak Formulary Committee added *Celebrex* and *Vioxx* (rofecoxib) to the formulary for a select patient population:

- history of PUD, NSAID-related ulcer, clinically significant GI bleeding, or coagulation defect
- concurrent use of corticosteroids, anticoagulants, antiplatelet agents, methotrexate
- failure of an **adequate trial** with at least 2 different NSAIDs

Dosing guidelines are as follows:

- Celebrex
  OA in adults = 100mg bid or 200mg qd
  RA in adults = 100mg to 200mg bid
  please indicate RA diagnosis on prescription
- Vioxx
  OA in adults = 12.5mg to 25mg qd

Use of doses greater than Celebrex 200mg per day or Vioxx 25mg per day need to be accompanied by a letter of justification from the provider through the Service Line Chief.

"Leave nothing for tomorrow which can be done today."
~ Abraham Lincoln

ACCUTANE PROGRAM

Starting **10 April 2002**, there will be new dispensing procedures for *Accutane* (isotretinoin) implemented by the manufacturer, Roche Laboratories, Inc. Roche, working with the FDA, has revised its *Accutane Pregnancy Prevention Program* with a new risk management program, the *System to Manage Accutane Related Teratogenicity* or S.M.A.R.T. In order to prescribe *Accutane* after 10 April, the prescriber must be enrolled with Roche, obtaining Qualification Stickers which are to be attached to each prescription for *Accutane*. A **maximum of a 30-day supply without refills** must be filled by the patient within 7 days from the "qualification" date. Pharmacy is required to give the patient a Medication Guide with each prescription.

In order to "qualify" for a prescription, the female patient must have had 2 negative urine or serum pregnancy tests before receiving the initial *Accutane* prescription. A pregnancy test must be repeated every month prior to the female patient receiving a prescription. She must also have selected and have committed to using 2 forms of effective contraception simultaneously, with counseling about contraception and behaviors repeated on a monthly basis. A signed consent form must also be on file.

If you have not received information on this program and plan to prescribe *Accutane*, you must contact Roche at 1-800-93-ROCHE for information on the program.

History

- The President has come in all shapes and sizes. Abraham Lincoln (16th) was our tallest, at 6'4", James Madison (4th) our smallest at 5'4", and William Howard Taft (27th) our biggest at 340 pounds. Ronald Reagan (40th) was our oldest, nearly 70 when he started his first term; Theodore Roosevelt (26th) the youngest at 42.
- Andrew Johnson (17th) was illiterate at 18— his bride taught him to read and write. Both Jimmy Carter (39th) and John Kennedy (35th) understood and read 2,000 words a minute. Richard Nixon (37th) was an accomplished pianist. Herbert Hoover (31st) loved to fly fish.
- Teddy Roosevelt, who liked to hunt, once refused to shoot a bear cub. His refusal inspired a political cartoon, which inspired a new toy, the Teddy Bear. "No president has ever enjoyed himself as much as I have enjoyed myself," he said.
- Dwight Eisenhower (34th), after living with all the world watching, thought otherwise: "Oh, that lovely title, ex-president."

From: Dailycelebrations.com

DIABETES AND HYPERTENSION

Nearly three-quarters of adults diabetics in the US have hypertension and investigators at the National Center for Chronic Disease Prevention and Health Promotion, CDC, say that US control of hypertension is inadequate. The investigators used the Third National Health and Nutrition Examination Survey (1988 - 1994) of the civilian, non-institutionalized population of the US to estimate hypertension prevalence and to examine its treatment and control among adults with diagnosed diabetes. The survey included 1,507 adult participants, aged 18 years and over, with self-reported diabetes and consisted of an interview and a physical exam in which blood pressure was measured.

Estimating from their findings, the investigators concluded that 71% of all US adult diabetics had elevated blood pressure. Prevalence rose with age and was high in both sexes as well as among Mexican Americans, non-Hispanic blacks, and non-Hispanic whites. Only 12% had a mean blood pressure below 130/85 while 45% had a mean blood pressure below 140/90. Control of hypertension was least common among older people.

American Journal of Preventive Medicine, 2002; 22(1)

HERB OF THE (every other) MONTH

Flax (*Linum usitatissimum*; common names: flax, flaxseed, linseed, lint bells, linum) has been used for more than 10,000 years as a source of fiber for weaving and clothing. Flax is prepared from the fibers in the stem of the plant, and linseed oil (derived from the flaxseed) has been used as a topical demulcent and emollient and as a laxative. Traditional medicinal uses of the plant have included the treatment of coughs and colds, constipation and UTIs. Current uses of flax include constipation, functional disorders of the colon resulting from laxative abuse, irritable bowel syndrome, and diverticulitis; as a supplement to decrease the risk of hypercholesterolemia and atherosclerosis; and externally as a poultice to treat areas of local inflammation.

Flaxseed and linseed oil are rich in unsaturated fatty acids, including linolenic, linoleic, and oleic acids. Approximately 3% to 6% of the plant contains soluble fiber mucilage consisting of galactose, arabinose, rhamnose, xylose, galactuonic, and mannuronic acids. Seed chaff and leaves contain cyanogenic glycosides, linamarin, linustatin, and nicolenustatin. Interest has centered on the ability of diets rich in flax to improve lipid profiles. One analysis took healthy female volunteers who supplemented their diet with 50 grams of ground flaxseed per day for 4 weeks with resulting decreases in total cholesterol by 9% and LDL cholesterol by 18%. An additional analysis in humans noted a decrease in thrombin-mediated platelet aggregation. The lignans contained in flax have shown weak estrogenic and antiestrogenic properties. When healthy women ingested flaxseed powder for 3 menstrual cycles, the ovulatory flax cycles were consistently associated with a longer luteal phase, with no differences between control and flax-cycles in estradiol or estrone levels. These results are prompting interest in the role of flax lignans and the possible potential to lower the risk of breast and other hormone-dependent cancers.

The dose for flax is 1 to 2 tablespoons of oil or mature seeds daily in two or three divided doses. The average dose is 1 oz of oil or mature seeds daily. For topical use, the dose is 30 to 50 grams of flax meal applied as a hot, moist poultice or compress as needed.

Adverse reactions include diarrhea, flatulence (encourage patient to drink plenty of fluids to minimize), and nausea. Immature seedpods are especially poisonous (contain cyanogenic nitrates and glucosides); overdose symptoms include, but not limited to, shortness of breath, tachypnea, weakness, and unstable gait progressing to paralysis and seizures. Use of flax with laxatives and stool softeners may increase the laxative action and concurrent use should be avoided. Avoid taking flax concurrently with oral medications as decreased absorption may occur. Flax is contraindicated in pregnant and breast-feeding women because the herb's hormonal effects may cause teratogenicity or spontaneous abortion. Avoid use in patients with prostate cancer or suspected or actual ileus.

References: *The Review of Natural Products* (1995), *Complementary & Alternative Medicines* (1999)

Q & A

Internal Use Only

NEW DRUGS/INDICATIONS

IDEC Pharmaceuticals Corporation received FDA approval for *Zevalin* (ibritumomab tiuxetan) for the treatment of non-Hodgkin's lymphoma for patients who do not respond to standard chemotherapy treatments or to the use of *Rituxan* (rituximab) alone. It must be used along with *Rituxan.*

Bristol-Myers Squibb received FDA approval for a new one tablet 600mg formulation of *Sustiva* (efavirenz), a non-nucleoside reverse transcriptase inhibitor used in combination treatment for HIV. The new tablet formulation provides the option of one 600mg *Sustiva* tablet once daily instead of three 200mg capsules once daily.

Amgen received FDA approval for *Neulasta* (pegfilgrastim) for the treatment of febrile neutropenia due to chemotherapy. *Neulasta* is administered as a single fixed dose per chemotherapy cycle for decreasing the incidence of infection in patients with non-myeloid malignancies receiving myelosuppressive chemotherapy.

Sepracor received FDA approval for *Xopenex* (levalbuterol HCl) inhalation solution for the treatment or prevention of bronchospasm in children 6 to 11 years old with reversible obstructive airway disease.

Novo Nordisk Pharmaceuticals received FDA approval for *NovoLog* (insulin aspart [rDNA origin] injection) for pump therapy in diabetics.

Akorn, Inc. received FDA approval to market *Paremyd* (hydroxyamphetamine hydrobromide 1% and tropicide 0.25%), a topical mydriatic/cycloplegic combination product that Akorn acquired from Allergan, Inc in 1997.

Orphan Pharmaceuticals, Inc received FDA approval for *Orfadin* (nitisinone) to treat hereditary tyrosinemia type 1 (HT-1), a rare pediatric disease causing progressive liver failure and liver cancer in young children. Fewer than 100 children in the U.S. are affected by HT-1. *Orfadin* is an orphan drug.

Immunex Corporation and Wyeth-Ayerst received FDA approval for *Enbrel* (etanercept) for the treatment of psoriatic arthritis.

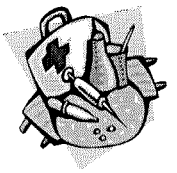
Berlex Laboratories received FDA approval for a new room temperature formulation of *Betaseron* (interferon beta-1b) for subcutaneous injection. *Betaseron* is indicated for the treatment of relapsing-remitting multiple sclerosis.

"A good heart is better than all the heads in the world."
~ Edward Bulwer-Lytton

DRUG WARNING - *CLOZARIL*

Clozaril (clozapine), an atypical antipsychotic, has been associated with an increased risk of myocarditis. The manufacturer, Novartis, has strengthened the Boxed Warning and Warnings section of the prescribing information to include information on the association of myocarditis with clozapine therapy. The increased risk is especially during, but not limited to, the first month of therapy.

ADVERSE DRUG REACTION REPORT



There were 33 adverse drug reactions (ADRs) documented for November (n=17) and December (n=16), of which 12 (36%) were reported **spontaneously** (3 each from Family Practice and Internal Medicine; 2 from inpatient pharmacy; and 1 each from PACC, Pediatrics, RTMC, and Urology). The most prevalent adverse events reported involved the anti-infective agents (n=12; 36%), the analgesic agents (n=7; 21%), and the cardiovascular agents (n=3; 9%). Dermatologic consequences make up the majority of the events reported (n=19; 58%) followed by gastrointestinal consequences (n=6; 18%). The rate of outpatient ADR reporting has remained consistent over the past year.

One event was deemed moderate on the severity scale (mild, moderate, severe, fatal) due to hospitalization: a 51 year old female seen in the ER at the AFA for a headache was given *Benadryl*, *Ativan*, and *Phenergan.* She became restless and uncooperative. The adverse event was originally thought to be akathesia from the *Phenergan*, so additional *Benadryl* and *Ativan* were given. The patient was transferred to the ICU at Evans where *Ativan* was continued. She became incoherent, flailing, and required restraints. Noticing that the *Ativan* made the reaction worse, the patient was given 1mg of *Haldol*, and she recovered. She was instructed to avoid all benzodiazepines in the future.

Thank you to all health care personnel who continue to report adverse events.